

1. An antibody or fragment thereof that specifically binds to a low density lipoprotein binding protein-2 (LBP-2) polypeptide.

2. The antibody or fragment thereof of claim 1, comprising an antibody fragment  
5 selected from the group consisting of an Fab fragment, an Fab' fragment, and an F(ab')<sub>2</sub> fragment.

3. The antibody or fragment thereof of claim 1, comprising an antibody fragment  
10 selected from the group consisting of an F(v) fragment, a heavy chain monomer, a heavy chain dimer, a heavy chain trimer, a light chain monomer, a light chain dimer, a light chain trimer, and a dimer consisting of one heavy and one light chain.

4. The antibody or fragment thereof of claim 1, comprising an antibody that is a monoclonal antibody.

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5. The antibody or fragment thereof of claim 1, wherein the antibody or fragment thereof blocks binding of low density lipoprotein (LDL) to the LBP-2 polypeptide.

6. The antibody or fragment thereof of claim 1, wherein the LBP-2 polypeptide  
20 consists of the sequence of SEQ ID NO:47 or SEQ ID NO:43.

7. The antibody or fragment thereof of claim 1, wherein the LBP-2 polypeptide consists of the sequence of SEQ ID NO:2 or SEQ ID NO:7.

25 8. The antibody or fragment thereof of claim 7, comprising an antibody fragment selected from the group consisting of an Fab fragment, an Fab' fragment, and an F(ab')<sub>2</sub> fragment.

9. The antibody or fragment thereof of claim 7, comprising an antibody fragment  
30 selected from the group consisting of an F(v) fragment, a heavy chain monomer, a heavy

chain dimer, a heavy chain trimer, a light chain monomer, a light chain dimer, a light chain trimer, and a dimer consisting of one heavy and one light chain.

10. The antibody or fragment thereof of claim 7, comprising an antibody that is a  
5 monoclonal antibody.

11. The antibody or fragment thereof of claim 7, wherein the antibody or fragment thereof blocks binding of LDL to the LBP-2 polypeptide.

10 12. A humanized, chimeric, or human antibody or fragment thereof that specifically binds to an LBP-2 polypeptide.

13. The antibody or fragment thereof of claim 12, comprising an antibody fragment selected from the group consisting of an Fab fragment, an Fab' fragment, and  
15 an F(ab')<sub>2</sub> fragment.

14. The antibody or fragment thereof of claim 12, comprising an antibody fragment selected from the group consisting of an F(v) fragment, a heavy chain monomer, a heavy chain dimer, a heavy chain trimer, a light chain monomer, a light  
20 chain dimer, a light chain trimer, and a dimer consisting of one heavy and one light chain.

15. The antibody or fragment thereof of claim 12, wherein the antibody or fragment thereof is a humanized antibody or fragment thereof.

25 16. The antibody or fragment thereof of claim 12, wherein the antibody or fragment thereof is a chimeric antibody or fragment thereof.

17. The antibody or fragment thereof of claim 16, wherein the chimeric antibody or fragment thereof contains a constant region derived from a human antibody and a  
30 variable region derived from a mouse antibody.

18. The antibody or fragment thereof of claim 12, wherein the antibody or fragment thereof is a human antibody or antibody or fragment thereof.

5 19. The antibody or fragment thereof of claim 12, wherein the antibody or fragment thereof blocks binding of LDL to the LBP-2 polypeptide.

20. The antibody or fragment thereof of claim 12, wherein the LBP-2 polypeptide consists of the sequence of SEQ ID NO:47 or SEQ ID NO:43.

10 21. The antibody or fragment thereof of claim 12, wherein the LBP-2 polypeptide consists of the sequence of SEQ ID NO:2 or SEQ ID NO:7.

22. The antibody or fragment thereof of claim 21, comprising an antibody fragment selected from the group consisting of an Fab fragment, an Fab' fragment, and  
15 an F(ab')<sub>2</sub> fragment.

23. The antibody or fragment thereof of claim 21, comprising an antibody fragment selected from the group consisting of an F(v) fragment, a heavy chain monomer, a heavy chain dimer, a heavy chain trimer, a light chain monomer, a light  
20 chain dimer, a light chain trimer, and a dimer consisting of one heavy and one light chain.

24. The antibody or fragment thereof of claim 21, wherein the antibody or fragment thereof is a humanized antibody or fragment thereof.

25 25. The antibody or fragment thereof of claim 21, wherein the antibody or fragment thereof is a chimeric antibody or fragment thereof.

26. The antibody or fragment thereof of claim 25, wherein the chimeric antibody or fragment thereof contains a constant region derived from a human antibody and a  
30 variable region derived from a mouse antibody.

27. The antibody or fragment thereof of claim 21, wherein the antibody or fragment thereof is a human antibody or fragment thereof.

5 28. The antibody or fragment thereof of claim 21, wherein the antibody or fragment thereof blocks binding of LDL to the LBP-2 polypeptide.

29. A preparation of polyclonal antibodies that that specifically bind to an LBP-2 polypeptide.

10 30. The preparation of claim 29, wherein the antibodies block binding of LDL to the LBP-2 polypeptide.

15 31. The preparation of claim 29, wherein the LBP-2 polypeptide consists of the sequence of SEQ ID NO:47 or SEQ ID NO:43.

32. The preparation of claim 29, wherein the LBP-2 polypeptide consists of the sequence of SEQ ID NO:2 or SEQ ID NO:7.

20 33. The preparation of claim 32, wherein the antibodies block binding of LDL to the LBP-2 polypeptide.

34. The antibody or fragment thereof of claim 1, wherein the antibody or fragment thereof comprises a label.

25 35. The antibody or fragment thereof of claim 34, wherein the label is a radiolabel.

30 36. The antibody or fragment thereof of claim 1, wherein the antibody or fragment thereof comprises a technetium-binding ligand.

37. The antibody or fragment thereof of claim 1, wherein the antibody or fragment thereof comprises a gadolinium-binding chelator.

5 38. The antibody or fragment thereof of claim 37, wherein the gadolinium-binding chelator is diethylene triamine penta-acetic acid (DTPA).

39. The antibody or fragment thereof of claim 7, wherein the antibody or fragment thereof comprises a label.

10 40. The antibody or fragment thereof of claim 39, wherein the label is a radiolabel.

15 41. The antibody or fragment thereof of claim 7, wherein the antibody or fragment thereof comprises a technetium-binding ligand.

42. The antibody or fragment thereof of claim 7, wherein the antibody or fragment thereof comprises a gadolinium-binding chelator.

20 43. The antibody or fragment thereof of claim 42, wherein the gadolinium-binding chelator is DTPA.

44. The antibody or fragment thereof of claim 12, wherein the antibody or fragment thereof comprises a label.

25 45. The antibody or fragment thereof of claim 44, wherein the label is a radiolabel.

30 46. The antibody or fragment thereof of claim 12, wherein the antibody or fragment thereof comprises a technetium-binding ligand.

47. The antibody or fragment thereof of claim 12, wherein the antibody or fragment thereof comprises a gadolinium-binding chelator.

5       48. The antibody or fragment thereof of claim 47, wherein the gadolinium-binding chelator is DTPA.

49. The antibody or fragment thereof of claim 21, wherein the antibody or fragment thereof comprises a label.

10       50. The antibody or fragment thereof of claim 49, wherein the label is a radiolabel.

15       51. The antibody or fragment thereof of claim 21, wherein the antibody or fragment thereof comprises a technetium-binding ligand.

52. The antibody or fragment thereof of claim 21, wherein the antibody or fragment thereof comprises a gadolinium-binding chelator.

20       53. The antibody or fragment thereof of claim 52, wherein the gadolinium-binding chelator is DTPA.

54. A pharmaceutical composition comprising the antibody or fragment thereof of claim 1 and a pharmaceutically acceptable carrier.

25       55. A pharmaceutical composition comprising the antibody or fragment thereof of claim 7 and a pharmaceutically acceptable carrier.

30       56. A pharmaceutical composition comprising the antibody or fragment thereof of claim 12 and a pharmaceutically acceptable carrier.

57. A pharmaceutical composition comprising the antibody or fragment thereof of claim 21 and a pharmaceutically acceptable carrier.

58. A cell line that produces the antibody of claim 1.

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59. The cell line of claim 58, wherein the cell line is a hybridoma.

60. A cell line that produces the antibody of claim 7.

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61. The cell line of claim 60, wherein the cell line is a hybridoma.

62. A cell line that produces the antibody of claim 12.

63. The cell line of claim 62, wherein the cell line is a hybridoma.

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64. A cell line that produces the antibody of claim 21.

65. The cell line of claim 64, wherein the cell line is a hybridoma.

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66. A method for detecting an atherosclerotic lesion in an animal, the method comprising:

administering to an animal the antibody or fragment thereof of claim 7 under conditions that allow the antibody or fragment thereof to interact with LBP-2 present in an atherosclerotic lesion so as to result in labeled LBP-2; and

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determining the localization or quantification of the labeled LBP-2 by imaging so as to detect the presence of an atherosclerotic lesion in the animal.

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67. The method of claim 66, wherein the imaging is selected from the group consisting of magnetic resonance imaging, gamma camera imaging, single photon emission computed tomographic imaging, and positron emission tomography.

68. The method of claim 66, wherein the antibody or fragment thereof comprises a radiolabel.

69. The method of claim 66, wherein the antibody or fragment thereof comprises  
5 a technetium-binding ligand.

70. The method of claim 66, wherein the antibody or fragment thereof comprises a gadolinium-binding chelator.

10 71. The method of claim 70, wherein the gadolinium-binding chelator is DTPA.